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Windows and doors - Soft and heavy body impact -
Test method, safety requirements and classification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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EUROPEAN STANDARD

EN 13049

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2023

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Supersedes EN 13049:2003

English Version

Windows and doors - Soft and heavy body impact - Test method, safety requirements and classification

Fenêtres - Choc de corps mou et lourd - Méthode d'essai, prescriptions de sécurité et classification

Fenster und Türen - Belastung mit einem weichen, schweren Stoßkörper - Prüfverfahren, Sicherheitsanforderungen und Klassifizierung

This European Standard was approved by CEN on 4 September 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13049:2023) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13049:2003.

This document is one of a series of standards for windows and doors.

The revision of this document clarifies the test method; furthermore, it supplements the scope of the standard for pedestrian doors. It does not affect existing test evidence of EN 13049:2003. The main changes compared to the previous edition EN 13049:2003 are listed below:

- Clause 1: pedestrian doorsets have been included;
- Clause 5: review and clarification of preparation of the test specimen;
- Clause 6: supplement and clarification of testing procedures;
- Clause 7: introduction of a drop height for class 0 in Table 1;
- Clause 7: addition and clarification of assessment procedures for internal pedestrian doorsets;
- Clause 8: supplement of necessary description of test specimen.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document specifies the test method, safety requirements and classification when determining the effect on a complete window or pedestrian doorset impacted with a soft and heavy body. Any secondary moving sashes, casements, leaves, mullions, transoms, T-connectors or fixed lights which can be mounted internally to the main casements or sashes, are intended to also be similarly tested and evaluated for the classification for the complete product.

The test applies to all types of infill of whatever materials including glass. It is not intended to classify the strength of the glass when used as an infill. It is intended to assess the interactions between all components of a window with particular regard to safety in use. It is also applicable to assess the ability of a doorset to keep in place glazed parts.

NOTE 1 The test method is aimed for glazed pedestrian doorsets with injury risk, but can also be used for other types of pedestrian doorsets if requested by the client.

NOTE 2 The test has been devised to suit all window or pedestrian doorset types, configurations and materials.

NOTE 3 For the classification of glass see EN 12600.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1627:2021, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Requirements and classification*

EN 1630:2021, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance to manual burglary attempts*

EN 12519, *Windows and pedestrian doors — Terminology*

EN 12600, *Glass in building — Pendulum test — Impact test method and classification for flat glass*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1627:2021 and EN 12519 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— IEC Electropedia: available at <https://www.electropedia.org/>

— ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Apparatus

The apparatus shall consist of a rigid subframe into which the complete specimen can be mounted using the fixing system and devices provided by the client.

The impactor as specified in EN 12600 shall be mounted on a horizontal or vertical axis, as appropriate for the requirements of access to the impact point. In addition, wires, pulleys, hooks and suitable height adjusting devices are needed, as specified in EN 12600.